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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,180	09/08/2003	Young-Sin Park	030681-558	8421

21839 7590 09/30/2005

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EXAMINER

WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,180

Applicant(s)

PARK ET AL.

Examiner

Laura S. Weiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-8-03; 7-2-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hotomi et al. (4,906,537).

Hotomi et al. teaches in column 1, lines 30-43, an electrolyte layer constituted of solid electrolyte layer having the formula $\text{Li}_{3.6}\text{Si}_{0.6}\text{P}_{0.4}\text{O}_4$ is dispersed in a polymeric thin layer such as polyethylene oxide for the formation of the solid electrolyte layer. The application of polymeric thin layer to a solid electrolyte layer advantageously makes it possible to prepare a paper-like an light secondary cell excellent in flexibility and processing characteristics. [$\text{Li}_{3.6}\text{Si}_{0.6}\text{P}_{0.4}\text{O}_4$ can be written as $\text{Li}_{0.396}\text{Si}_{0.066}\text{P}_{0.044}\text{O}_{0.44}$ which is the same ratio and the same specified empirical formula].

3. Claims 1, 4, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiratani et al. (4,645,726).

Hiratani et al. teaches in column 3, Example 2, a battery comprising a 10 μm thick solid electrolyte which an amorphous thin film of $\text{Li}_{3.6}\text{Si}_{0.6}\text{P}_{0.4}\text{O}_4$. [$\text{Li}_{3.6}\text{Si}_{0.6}\text{P}_{0.4}\text{O}_4$

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can be written as $Li_{0.396}Si_{0.066}P_{0.044}O_{0.44}$ which is the same ratio and the same specified empirical formula].

4. Claims 1, 4, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanehori et al. (4,572,873) or (4,555,456).

Kanehori et al. ('873) teaches in column 4, a film having a composition of $Li_{3.6}Si_{0.6}P_{0.4}O_4$ (film thickness about 1 μm) was formed on the TiS₂ film as an electrolyte film. *[$Li_{3.6}Si_{0.6}P_{0.4}O_4$ can be written as $Li_{0.396}Si_{0.066}P_{0.044}O_{0.44}$ which is the same ratio and the same specified empirical formula].*

Kanehori et al. ('456) teaches in column 3, Example 1, a film having a composition of $Li_{3.6}Si_{0.6}P_{0.4}O_4$ (film thickness about 8 μm) was formed on the TiS₂ film as an electrolyte film. Kanehori et al. teaching batteries comprising the electrolyte film. *[$Li_{3.6}Si_{0.6}P_{0.4}O_4$ can be written as $Li_{0.396}Si_{0.066}P_{0.044}O_{0.44}$ which is the same ratio and the same specified empirical formula].*

5. Claims 2-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Cogan et al. (Re. 34,469).

Cogan et al. teaches in column 6, lines 29-60, a thin film solid electrolyte preferably 0.1 μm is prepared by sequential deposition of layers by thin film processes preferably by vacuum sputtering. The solid electrolyte comprises a ternary mixture such as Li₂O, SiO₂ and ZrO₂ and that Ta₂O₅ or Nb₂O₅ can also be included.


Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura S Weiner
Primary Examiner
Art Unit 1745

September 19, 2005